

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A magnetic head having a write function, comprising:
a lower core including a plurality of layers;
an upper core including a plurality of layers;
a lower core edge layer included in the lower core; ~~and~~
an upper core edge layer included in the upper core, and
a non-magnetic film provided between the lower core edge layer and the upper
core edge layer, the lower core edge layer and the upper core edge layer defining a write gap on a side of an air bearing surface;

wherein the lower core except for the lower core edge layer is recessed from the air bearing surface of the magnetic head, wherein an edge on a side opposite to the air bearing surface of the lower core edge layer is configured to be aligned with an edge on the side opposite to the air bearing surface of the upper core edge layer and the non-magnetic film.

2. (Previously Presented) The magnetic head according to claim 1, wherein a non-magnetic film is formed on the lower core except for the lower core edge layer on a side of the air bearing surface.

3. (Withdrawn) The magnetic head according to claim 1, wherein a three-layer pole piece having the lower core edge layer, the upper core edge layer, and a write gap layer formed between the lower core edge layer and the upper core edge layer is configured such that a width in the track width direction of a side opposite to the side of the air bearing surface is larger than a width in the track width direction on the side of the air baring surface.

4. (Withdrawn) The magnetic head according to claim 1, wherein a non-magnetic layer in the write gap between the lower core edge layer and the upper core edge layer

is formed such that a thickness of a region opposite to a side of the air bearing surface is larger than a thickness of a region on the side of the air bearing surface.

5. (Currently Amended) A magnetic head having a write function, comprising:
a lower core having a first lower pole piece formed under coils and a second lower pole piece formed under a write gap layer; and
an upper core having a first upper pole piece formed above the coils and a second upper pole piece formed above the write gap layer;
wherein the second lower pole piece is recessed from an air bearing surface of the magnetic head, wherein an edge on a side opposite to the air bearing surface of the second lower pole piece is configured to be aligned with an edge on the side opposite to the air bearing surface of the second upper pole piece and the write gap layer.

6. (Original) The magnetic head according to claim 5, wherein:
a patterned magnetic material is formed between the first lower pole piece and the second lower pole piece, and
the first lower pole piece is recessed from a facet of the patterned magnetic material on a side of the air bearing surface of the magnetic head.

7. (Withdrawn) The magnetic head according to claim 5, wherein:
the patterned magnetic material is formed between the first upper pole piece and the second upper pole piece, and
the first upper pole piece is recessed from a facet of the patterned magnetic material on a side of the air bearing surface of the magnetic head.

8. (Withdrawn) The magnetic head according to claim 5, wherein a three-layer pole piece having the second lower pole piece, the second upper pole piece, and the write gap layer formed between the second lower pole piece and the second upper pole piece is configured such that a width in a track width direction of a side opposite to a side on the air bearing surface

of the three-layer pole piece is larger than a width in the track width direction on the side of the air bearing surface.

9. (Withdrawn) The magnetic head according to claim 5, wherein the write gap layer is a non-magnetic layer formed such that a thickness of a region opposite to a side of the air bearing surface is larger than a thickness of a region on the side of the air bearing surface.

10. (Withdrawn) The magnetic head according to claim 5, wherein a non-magnetic film pattern is formed at least under the second lower pole piece or above the second upper pole piece, and the non-magnetic film pattern has its facet located at a position recessed from the air bearing surface.

11. (Withdrawn) The magnetic head according to claim 5, wherein a magnetic film is formed as an underlying layer under the second lower pole piece.

12. (Currently Amended) A magnetic head having a write head, comprising:
a multi-layer lower core including a lower core edge layer; and
a multi-layer upper core including an upper core edge layer, and
a write gap layer provided between the lower core edge layer and the upper core edge layer;

wherein:

the lower core edge layer and the upper core edge layer define a write gap on a side of an air bearing surface; and

the lower core except for the lower core edge layer is recessed from the air bearing surface of the magnetic head, wherein an edge on a side opposite to the air bearing surface of the lower core edge layer is configured to be aligned with an edge on the side opposite to the air bearing surface of the upper core edge layer and the write gap layer.

13. (Previously Presented) The magnetic head according to claim 12, wherein a non-magnetic film is formed on the lower core except for the lower core edge layer on a side of the air bearing surface.

14. (Withdrawn) The magnetic head according to claim 12, and further comprising a write gap layer formed between the lower core edge layer and the upper core edge, the lower core edge layer, the upper core edge layer, and the write gap layer defining a three-layer pole piece;

the three-layer pole piece being configured such that a width in the track width direction of a side opposite to the side of the air bearing surface is larger than a width in the track width direction on the side of the air bearing surface.

15. (Withdrawn) The magnetic head according to claim 12, and further comprising a non-magnetic write gap layer between the lower core edge layer and the upper core edge layer;

the non-magnetic write gap layer being formed such that a thickness of a region opposite to a side of the air bearing surface is larger than a thickness of a region on the side of the air bearing surface.

16. (Currently amended) A magnetic head having a write head, comprising:
a set of coils;
a lower core having a first lower pole piece formed under the coils;
a non-magnetic write gap layer;
a second lower pole piece formed under the write gap layer; and
an upper core having a first upper pole piece formed above the coils and a second upper pole piece formed above the write gap layer;

the second lower pole piece is recessed from an air bearing surface of the magnetic head and has a flare structure, wherein an edge on a side opposite to the air bearing surface of the second lower pole piece is configured to be aligned with an edge on the side opposite to the air bearing surface of the second upper pole piece and the write gap layer.

17. (Original) The magnetic head according to claim 16, wherein:
a patterned magnetic material is formed between the first lower pole piece and the second lower pole piece, and

the first lower pole piece is recessed from a facet of the patterned magnetic material on a side of the air bearing surface of the magnetic head.

18. (Withdrawn) The magnetic head according to claim 16, wherein:
 - the patterned magnetic material is formed between the first upper pole piece and the second upper pole piece, and
 - the first upper pole piece is recessed from a facet of the patterned magnetic material on a side of the air bearing surface of the magnetic head.

19. (Withdrawn) The magnetic head according to claim 16, wherein:
the second lower pole piece, the write gap layer, and the second upper pole piece define a three-layer pole piece that is configured such that a width in a track width direction of a side opposite to a side on the air bearing surface of the three-layer pole piece is larger than a width in the track width direction on the side of the air bearing surface.

20. (Withdrawn) The magnetic head according to claim 16, wherein the write gap layer is formed such that a thickness of a region opposite to a side of the air bearing surface is larger than a thickness of a region on the side of the air bearing surface.

21. (Withdrawn) The magnetic head according to claim 16, wherein:
a non-magnetic film pattern is formed at least under the second lower pole piece or above the second upper pole piece, and
the non-magnetic film pattern has its facet located at a position recessed from the air bearing surface.

22. (Withdrawn) The magnetic head according to claim 16, wherein a magnetic film is formed as an underlying layer under the second lower pole piece.